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STATE OF THE ART OF INFORMATION MANAGEMENT IN THE CARIBBEAN

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RESUME

La situation dans la Caraïbe en ce qui concerne la gestion de l'information a beaucoup évolué au cours des quinze dernières années, qu'il s'agisse du rassemblement, de l'analyse, de l'utilisation, de la commercialisation de l'information ou des moyens d'y accéder. En effet, pendant cette période, des systèmes d'information nationaux et des réseaux régionaux ont été conçus et développés et l'informatique a pris une grande importance. D'autres phénomènes ont eu aussi des conséquences pour la gestion de l'information dans la région: l'élaboration d'une Stratégie Régionale Des Systèmes d'Information, l'amélioration des modalités d'accès aux services des télécommunications, ce qui a favorisé la communication entre les différents systèmes, et la conjonction des recherches faites dans le domaine des sciences de l'information d'une part et des politiques établies dans le secteur de l'information de l'autre.

Ce sont des innovations faites essentiellement par les bibliothécaires d'université et des bibliothécaires d'établissements publics et spécialisés, encore qu'elles se manifestent plus dans le secteur gouvernemental. Que ces innovations aient réussi témoignent principalement du concours que les décideurs et les chercheurs ont accordé aux professionnels de l'information. De plus, ce succès indique très clairement que la diffusion de l'information est d'une importance primordiale pour le développement économique et social de la région. Par conséquent, on peut considérer q'un des événements les plus marquants de l'histoire de l'information dans la Caraïbe a été la création et la mise en application de la Stratégie Régionale Des Systèmes d'Information de la Caraïbe jusqu'à l'an 2000. Conçue sous l'égide du Secrétariat du Caricom et de la Commission Economique des Nations Unies Pour la Caraïbe, cette stratégie constitue un premier pas vers la conjonction de tous les efforts de gestion des ressources informationnelles de la région. S'harmonisant avec les politiques faites sur le plan national, elle sert de base d'un projet de contrôle et de mise à jour des innovations qui se réalisent dans ce domaine.

Entre-temps, la Caraïbe n'est pas pour autant à l'ecart des changements politiques, économiques et sociaux qui se produisent dans le reste du monde. De grands changements ont en lieu dans la Caraïbe et dans d'autres sociétés et concurrement nous assistons à la naissance d'une société internationale de l'information. Il en resulte des courants sociaux que les gestionnaires de l'information sont obligés de prendre en considération. A titre d'exemple, les gouvernements se démocratisent de plus en plus et le nombre des décideurs s'accroît en conséquence. A ces courants s'ajoutent la privatisation, la rationalisation des organismes gouvernementaux, et la multiplication des technologies de l'information qu'on peut exploiter de façon plus rentable, la question de l'environnement et son importance pour le développement, le rôle grandissant que joue la recherche dans la détermination des moyens de développement les plus performants.

Les systèmes d'information et les services qu'ils offrent aux usagers se transforment aussi sous la poussée d'autres phénomènes dont on peut citer les nouvelles orientations dans le domaine de l'administration de l'information comme dans les communications, deux secteurs qui s'imbriquent de plus en plus, et la montée de populations plus instruites et mieux informées et avec elle, l'évolution des moeurs. De plus, un plus haut degré de spécialisation dans des économies reposant sur la bonne exploitation de l'information mène à la réorganisation du travail, le rôle et l'aire d'activité des médias augmentent et les liens entre les organismes publics et privés deviennent plus importants.

Face à cette situation certaines question se posent nécessairement. Comment déterminer formuler et exécuter des stratégies qui correspondent aux besoins nouveaux des pays de la Caraïbe? Comment inciter ls décideurs à exploiter les sources d'information de façon efficace? Bien sûr les nouvelles strategies doivent tenir compte des réalités et des infrastructures existantes. La mise en oeuvre de ces stratégies passe nécessairement par la réorganisation des sources d'information actuelles. Il est nécessaire aussi de présenter les sources d'information sous un autre aspect tout en concevant des structures rentables qui permettent de créer des

systèmes d'information à caractère durable.

Autre question importante est celle de la nécessité de créer et d'évaluer des méthodologies propres aux spécificités de la région dans le but de l'expansion de ces systèmes, et de mesurer les effets de l'information sur le développement général de la Caraïbe. C'est une question qu'on traite déjà de façon remarquable dans un projet rélisé sous l'égide de la Consultative Committee on Caribbean Regional Information Systems avec le concours financier de l'IRDC. Le but en est de développer l'état de la science de l'information dans la région en promouvant des recherches relatives aux questions liées au maintien des systèmes d'information, notamment les possibilités de commercialisation des services, la question de la propriété à l'égard des données et bases de données, l'évaluation des politiques actuelle au sein de la Caraïbe, et les projets de formation et d'entraînement exigés par cette nouvelle ère de l'information que nous vivons.

I have been invited to address you today on the State of the Art in Information Management in the Caribbean, and certainly it gives me a great pleasure to do so, given that this is such a dynamic and innovative area in which we can all identify with some developments - from the development of value added computerized databases in the early 80's to the use of improved electronic communication facilities, which now make electronic communication available for improving access by users to sources of information.

Information management or information resources management are relatively new terms in the literature and the journal Information Management Review, for example, issued its first number as Summer 1985. Of course information management has in the past 20 years been influenced and shaped by innovations in computer and communications technologies, and while the changes in the Caribbean have come later, certainly the past 10 years have evidenced several innovations.

Marchand and Horton in Infotrends provide a useful map of the transitions which the information management function has gone through in the last 40 years and in this work Strategic Information Management is seen as involving a heavy dependence on the quality of information resources collected from the internal and external environment of the firm [or organization] but also sets the overall organizational context in which various functional strategies can operate. Strategic Management is therefore seen not only as requiring the effective use of information resources and technologies but also demands that information strategies be effectively integrated into and supportive of other business strategies of the firm, and I would say that this applies to other public as well as private corporations especially as there is the increasing requirement for self sufficiency for all organizations.

Our world is constantly being characterized as an Information Society, a global information society or an emerging information society. This of course is a very generalized interpretation of the many changes which are taking place in widely differing societies, and which therefore must have different degrees of implementation in each country or region. I think that it is more appropriate to say that we are living in an **emerging** Information Society, and that at least some characteristics of this new Society are reflected in all geographical areas. One means of determining the impact of this Society it the *increased capacity to make*

strategic use of information, described by Steven Rosell as "developing the conceptual and other mechanisms needed to translate data into information, and information into knowledge and ensuring that the most pertinent information is provided to the relevant people to take a given decision."

The Information Society can be characterized by :

- ***developments in information processing and telecommunications and the increasing links between these technologies;***
- ***the emergence of a more educated and informed population and associated value changes;***
- ***the increasing role and reach of the mass media;***
- ***higher degrees of specialization in a more knowledge-based economy and consequent changes in the structure of work; and***
- ***a much richer infrastructure of public and private organizations and a stronger degree of interaction amongst those organizations.***

The vast increase in information availability, and the compression in both time and space that result has been labelled "the Information Society." The issues have been raised by several writers including Steven Rosell in his report **Governing in an Information Society** (1992).

Participation in this Information Society implies the existence of an appropriate infrastructure, characterized by allocation of resources, and equitable access to information and to information technologies, and at the same time that the society has the flexibility to match the changing structures which are implicit in the conversion from the hierarchical to the interconnected structures of the Information Society.

Two of the important areas which facilitate the participation in this "Society" are the formulation and implementation of policies and plans - Strategic, Tactical or Operational, at the national, organizational, or intra-organizational levels, and the exploitation of information technologies and technological know-how generated by the "Society" itself.

A look at the Caribbean situation reflects a number of activities resulting in the definition of National Information Plans, and the implementation of some components of the plans under the coordination of government agencies. The integration of these plans into the national development agenda is the next stage which has to be achieved. This has been the case, for example, by Jamaica in the incorporation of a chapter on Information into the National Development Plan.

The definition of these policies and plans have certainly contributed to improved planning and management mechanisms, as well as access to information by researchers, policy makers, planners and other development personnel. The fact that much of the implementation has been through the libraries and documentation services, with less emphasis on other areas of information management needs to be recognized as an area in which a gap exists between the concepts articulated by the policies and plans and the eventual realizations.

Information Management is defined, in the new Corporate Program Framework of IDRC (March 1993), as **the collection, analysis, access, use and marketing of information.** These processes are expected to be undertaken in response to well defined information needs and constraints, identification of potential solutions, and the development and implementation of sustainable responses. They also imply continuous assessment and adjustments within the information transfer cycle.

The main questions before us are :

Is the present stage of development of information management in the Caribbean directed towards strategic use of information? and towards facilitating participation by the Caribbean population in the emerging Information Society, which is now being put in place by diverse forces worldwide?

What role can and do new information and communication technologies play in the access by decision makers to relevant information for decision making?

What are the roles, processes, and effects of communication, including indigenous knowledge systems, development media, and community-based communication systems in relation to information management?

What has been or will be the impact of information management, information systems and services, on the regional development agenda?

In the past decade, global experiences as well as those in Latin American and the Caribbean have shown dramatic changes in the availability of value-added communications capabilities, and in the capacities to obtain access to a wide range of information. You would be interested to know that in my home in Uruguay I listen in on WORLDNET discussions which from time to time feature discussions between Caribbean librarians and their US counterparts.

The impact of the new information activities, can be attributed to:

Blurring of distinctions between products and services;
The capacity of information systems to be more accessible to users, as in the case of databases which are now accessible online, is reducing to some degree the need for conventional products such as Current Awareness Bulletins.

Increasing availability of Value-added information services and products;
The output of information units is increasingly being reformatted and focussed on specific areas or requirements of users. These may take the form of : state of the art surveys, simulations and what-if models etc.

Interconnections and interoperability among components of information systems;
The increasing compatibility between software, hardware, and telecommunications protocols is improving the capacity of information systems to communicate with each other and with users.

The changing role of the intermediary as a result of increasingly direct communication linkages between sources of information and users;
Intermediaries, information specialists, information analysts are being required to play different roles than being only searchers or providers of basic information.

Globalization and liberalization of communication facilities, and of markets;
The interconnections of private and public information systems such as the linkages of many electronic mail systems into INTERNET makes these facilities increasingly more widely available.

Techniques and mechanisms which have been put in place for participation in the Information Society are also characterized by the capability to make more ***strategic use of information*** at all levels of the society, the participation of multiple stakeholders from the formerly separate public and private sectors, in the processes of information policy implementation, and generally in the development of more flexible organizational structures, with less formal lines of communication.

This scenario poses a number of challenges in the future implementation of Information Systems and Services for development in the Caribbean - Where are the horizons, and how can they best be approached? The emergence of the changes in the information sector are also coinciding with changes in the other sectors, and trends which will require changes in the structure of the information management function.

The following global trends are being reflected in all regions, and are resulting in factors which imply the need for changing patterns of information systems, and for significant developments. The trends can be summarized as:

- ***democratization of governments and the participation of multiple stakeholders in policy implementation;***

- ***privatization of governments and downsizing of government organizations and requirements for self-sufficiency;***

- ***decentralization of government and private sector organizations;***

- *development of new trading blocs such as the NAFTA, and MERCOSUR groupings*

- *increased availability of information technologies at lower costs;*

- *awareness of the environment, environmental accounting, and its relationship to development;*

- *increasing recognition of the role of participatory research in determining the design of development programs*

With the identification of such new issues which impact on the development of the Caribbean societies in general and therefore on the management of information systems and services for development, and on the access to and use of information, the need for information sciences and systems research and development is becoming more evident than had been the case in the previous decade.

These changes highlight the need for definition of methodologies and approaches, for defining the relationship between current issues and problems, the formulation of new policies, and the development of new flexible systems. With these changes, there will also be the need for testing approaches to assessment of the impact of information systems on the development agenda, and on productivity and competitiveness.

Caribbean practitioners have developed experience in several areas of information policy formulation and implementation and also in innovative areas of information management. On the other hand, there is not adequate experience in the areas of information science research which seeks solutions to these current questions. As a result of the need for improving linkages between research and practice, and the need for developing innovative research methodologies in relation to the changing regional scenario, the potential role of research in identifying new directions and horizons for information systems and services needs to be examined.

One of the global trends in research and development, participatory action research, presents itself as a means of linking practitioners with researchers in the search for paths to the development of new areas, particularly assessment of the impact of information systems and services, and the re-design of policies, systems

and services more in tune with the new requirements of the emerging Information Society.

The responsibility for designing and implementing national and regional information systems in the Caribbean, has to date mainly been the responsibility of central government agencies, and regional inter-governmental organizations, but as the changes in the range of stakeholders becomes evident, it is now necessary to look at the range of possible participants, or stakeholders in these processes and the kind of de facto policy implementation which exists.

A step back into the development of Caribbean information systems shows that the establishment of national and regional information systems in the Caribbean and the strategy which provides a framework for this development, has been focussed on Information for Decision Making or Information for Development. These were breaking new ground in the late seventies and early eighties when they were designed and the several regional systems which have been in place for between eight and fifteen years, have provided some innovative solutions such as the implementation of computerized databases, and electronic data transfer, to problems of information management at various stages of their development.

Important questions still remain in relation to the sustainability of these systems, and to strategic, tactical and operational choices which need to be made for the implementation of related policies.

The issues of the sustainability of information systems are immediately related to the maintenance of the existing systems, but also to the capacity of the systems' managements to forecast directions and to plan for and implement required changes. With recognition that political and financial support is required from the decision making and management levels, there is the need to relate the services and products more directly to the needs of decision makers who are required to make strategic use of locally relevant information. This requires some closer analysis and research into the information seeking behavior of the managers and decision makers, and their modes of information use.

Sustainability is also supported by the formulation and implementation of information policies, but the integration of national information policies with other policies in the national development agenda permits the information sector to

demonstrate its immediate relevance to other development activities.

Appropriate exploitation of new information technologies and related policies are also required to ensure the more effective provision of information, access to information by the user community, and access to technological know-how, both on the part of the information managers, and on the part of the user community.

In marketing terminology, market niches need to be sought and identified to enable the implementation of cost effective techniques, in the information services, and the movement toward the return on investments.

As several new areas are being identified in these issues of sustainability, areas requiring training as well as research entry points are being identified particularly in the assessment of the information needs of decision makers, the assessment of the impact of information systems, the integration of information and other development policies, and the strengthening of linkages between research and policy making.

One might also ask about the role of donors in the sustainability of information systems. Information systems in the Caribbean have been supported not only by Governments but also by the international agencies - and bilateral agencies such as IDRC, CIDA and USAID. In addition to grants, governments have been negotiating loans with the World Bank and the Inter-American Development bank for development activities involving information technology applications. Some important questions are being raised in relation to the need for indicators of return on investment and productivity, and these issues should be considered within present and future projects whether internally or externally funded.

We then need to ask:

Where does information management in the Caribbean go from here?

At the strategic level, the issue of further development of national information, and information and communication technology policies, are key factors in the future planning and development of the information sector and the regional and national systems.

The role of policies in supporting the development of information systems is a pivotal role which ensures that political and financial support can legitimately be sought for the implementation or upgrading of national information infrastructure.

The methodologies employed will be country and region specific, but certainly there is the need for the next step to be taken, as in the case of Jamaica, of incorporating policies and plans for the information sector into the National development Plans and or into the national planning process. This I see as a major step in the whole process of integrating information and other national development policies.

At the next stage the strategic stage, the advances in strategic policy are not, however, reflected by clearly defined policies at the organization level. The relationship between the various information units of national and regional organizations still need to be clarified and to be effective, logical and functional linkages need to be developed between:

The libraries
The Management Information
Systems/Electronic Data Processing Units
The Media/Public Relations Units
Statistical Units
Extension services

and the other information facilities of each organization. The diagram on the next page is an attempt to categorize the components of the information sector which need to be logically and organizationally linked.

Operational policies addressing the operational and day to day information management also affect system development, communication between systems, and the capacity of the system to deliver its products and services to users. Some de facto policies are in place as for example in the use of libraries and other text based databases of the use of Micro CDS/ISIS, and for compatible systems such as MINISIS. Such tools have in the past decade made database development and transfer much more effective than was the case before these tools were employed for information management in the Caribbean.

On these two levels, policies have been implemented but much more needs to be done to facilitate eventually the strategic use of information.

One of the factors which is undoubtly impacting on information management and on the sustainability of information systems is the increasing costs at all stages of information management, and the fact that the majority of information units are still classified as cost centres and have not begun to implement programs for cost effectiveness or self-sufficiency.

Definition of the value of information - within and outside the organization, and the products and services which can be marketed are two aspects of the sustainability of information systems. Examples of some kinds of marketing of services are being carried out by the Caribbean Technology Consultancy Service managed by the Caribbean Development Bank. This service while originally subsidized by the CDB and IDRC now continues, with client firms paying for the information services which they receive mainly in the form of technical consulting services. CARIRI in Trinidad and CEDOPEX in the Dominican Republic also provide examples of cost recovery in information services.

CARIRI is working towards self-sufficiency in the marketing of its information products and is at the point of beginning a project, supported by IDRC, for marketing of these information services. This project "Strategic Marketing for Information Services" will be an experimental research-type implementation in which a methodology appropriate to industrial information will be defined and tested on a sample of CARIRI's clientele. In order to serve its clients with information products and services that meet their needs and to generate income with sales of these, CARIRI plans to take a systematic approach to developing a market. In collaboration with the Centre de Recherche Industrielle du Quebec (CARIQ), CARIRI will conduct a project with the objective of adopting a strategic approach for the marketing of information services to industries in Trinidad and Tobago and to the other countries in the English-speaking Caribbean.

Promotion and evaluation are two closely related inputs into the marketing process, which provide a basis for marketing strategies and for adjustment of products and services.

THE INFORMATION SECTOR

INFORMATION SOURCES
TYPES OF INFORMATION

Quantitative Information	Bibliographical Information Textual information	Communication

INFORMATION FACILITIES

Statistical Services Data collection and analysis centres Archives	Libraries Documentation centres Information analysis centres Referral centres Clearinghouses services	Mass communications services Postal services Tele-communications Data communications services

INFORMATION ACTIVITIES

Information production
Primary information
Publishing
Secondary information
Analysis
Transaction information
Information brokerage
Registration and protection of intellectual property
Information use
User education
Marketing of information services
Information science research

INFORMATION AGENTS

Statisticians Data analysts	Information handlers and managers	Communicators Translators

Information and Communication Technologies have since the mid-80's begun playing a role in the organization of databases in the Caribbean and more recently in the establishment of electronic mail and communication facilities.

The facilities established by ECLAC, and Telecommunication Services of Trinidad and Tobago (TSTT) now allow some local and regional users to take advantage of this electronic communication facility, to communicate among themselves within the region, and to make contact with external systems. This is expected to provide major support to the communication between systems and subsequent interconnections.

The recent acquisition by the University of the West Indies of a supercomputer, and the establishment of an INTERNET node at the UWI is guaranteed to have a major impact on the regional capacity for communication with different sources of information, for collaborative research and other strategic uses of information. This facility expands on those offered by ECLAC and will illustrate some of the reductions in time and distance which are often cited as the result of the Information Society.

Local Area Networking such as that implemented within the Cuban national information system is one of the information tools which is judged to increase productivity, and at the same time to have the potential to increase users access to information. Emphasis has been placed on permitting user units faster access to a computerized union catalogue.

In addition to electronic networking, other information technologies are being employed for transforming data from basic figures or text into models and more user friendly formats. REDATAM (Retrieval of Data for Small Areas by Microcomputer)is a micro computer software to facilitate local level planning and which resulted from concerns expressed by regional statisticians, that the census data and survey data needed to be reformulated into a format which can be more readily understood and utilized by those responsible for planning municipal and other small area facilities and services.

Other geographical information systems, several in the public domain, are being implemented for cadastral surveying for distribution of services such as electricity services. A UNDP supported project for a system to ensure disaster preparedness in the countries of the organization of Eastern Caribbean States has been designed to summarize information on the availability of and the location of local facilities, and shelters required for preparedness in the event of disasters.

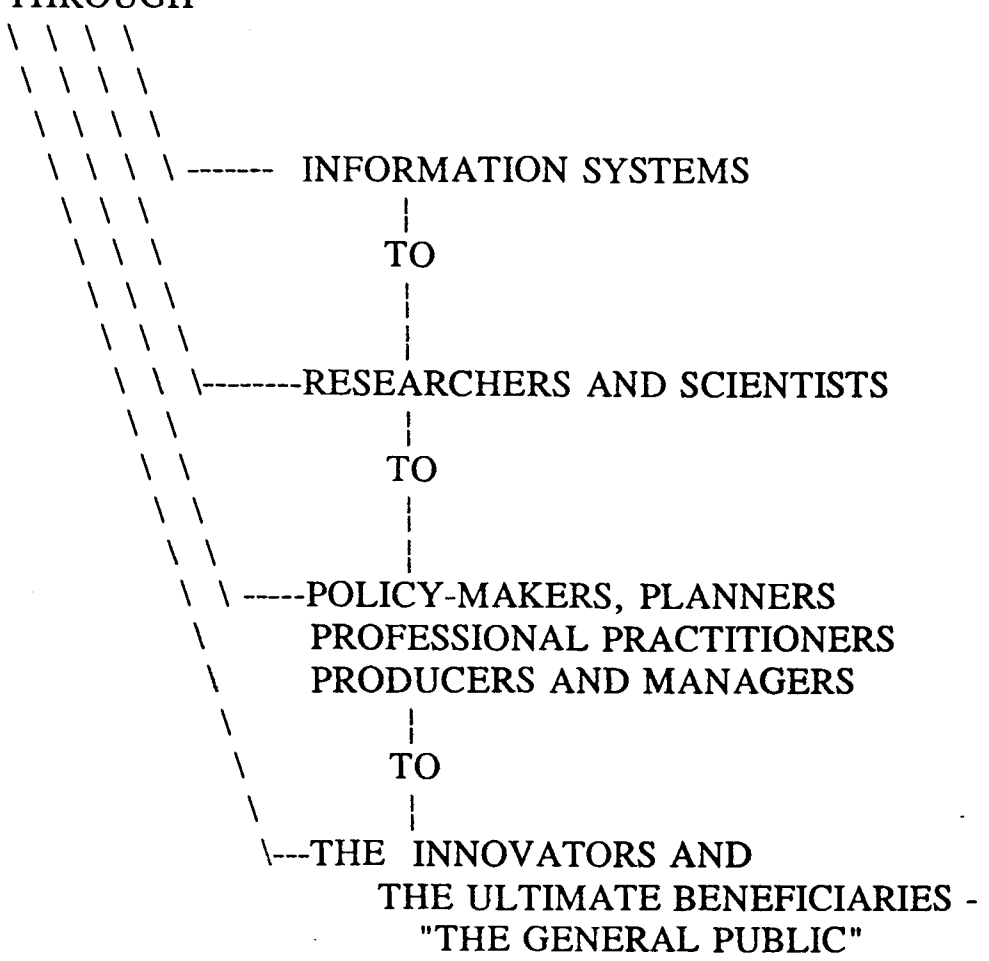
The capacity to exploit information and communication technologies is also a consequence of the information and communication technology policies. These policies impact at the strategic, tactical and operational levels, and are required by information systems to ensure that these technologies can be appropriately exploited.

We can look at this from two points of view, the type of technologies and the types of policies. The liberalization of trade policies has theoretically made basic information technologies - personal computers and compatible communication hardware more accessible as instruments in information management. But trade policies are of course not the only policies which need to be in place to enable appropriate use of these technologies. Removal of restrictions or tariff barriers needs to be counterbalanced by policies for Training, Management, and Access of Information.

I would like to look particularly at the ways in which information management can stimulate the strategic use of information for increased development impact. Caribbean policy makers in the past decade have become increasingly aware of the value of information as the basis of objective decision-making and as an input into policy implementation, a means of providing information on alternative courses of action.

The diagram on the following page shows the course of information flows from the development projects or activities to the various points on the information chain. The consequences of each stage illustrate that information actually transmitted is expected to be very specific and focussed, and used in clearly defined contexts.

TRANSMITTING THE RESULTS OF RESEARCH AND DEVELOPMENT ACTIVITIES TO IMPLEMENTATION



Information Management and information systems have provided information services to keep policy makers, planners and researchers aware of developments in their fields. CARISPLAN, and CEIS - the Caribbean Energy Information System, are examples of the systems which presently provide current awareness services based on national and regional bibliographic, textual and quantitative databases. The system - user interaction also results in services more closely related to the user's needs, and to more specific reference and referral services.

The development of systems more closely related to the strategic use of information has begun taking place in some areas. The Central Banks and related financial institutions have begun using the CS-Debt Recording and Management System for organizing data on national debt obligations and for generating simulations of alternative scenarios. Developing the systems to the stage of utilization can be a prolonged process involving data collection, and processing, and while the software has been installed by trained staff in Barbados, the Eastern Caribbean Central Bank, Guyana and Trinidad and Tobago, the most evident example of utilization has been in Guyana where the system provided the basis for strategies used in debt management and in rescheduling of the national debt. Custom built, systems and systems developed by the World Bank, The Commonwealth Secretariat and UNCTAD are also being used through out the public financial sectors, in Latin America.

This type of system, while very specialized and focussed offers an example of strategic use of information for planning and decision-making. I would like to dwell a bit on this type of information system which illustrates solutions to some of the problems experienced by users in both the public and private sectors in making use of the volumes of quantitative and bibliographic and other textual data which exists whether as a result of the censuses or other surveys, trade reports, etc.

Geographical information systems (GIS) are also being exploited to provide the basis for some of this type of decision-making. The need for defining paths towards the strategic use of information is certainly urgent. Information required

by researchers and policy makers comes from various sources, for example physical data, climatic data, data on infrastructure and population or human resources.

There are several GIS's in use in the Caribbean. Certainly the Depts. of Lands and Surveys are using such systems for the cadastral mapping output, while suppliers such as the Jamaica Public Service (Electricity) Company are using GIS for planning and monitoring distribution of services.

As a result of consultations carried out in 1982 and 1983, planners and statisticians considered that it was difficult, time-consuming and expensive to access specific information on small areas such as townships, city neighborhoods, or even particular blocks. In 1985 CELADE developed a user friendly interactive software package which helps to introduce desegregated population and housing information into development planning. It provides organizations with a simple means to store and access data which is relatively stable such as that from censuses, on a microcomputer. REDATAM stores the original census or other microdata on a hard disk in a hierarchical database, and permits users to obtain tabulations to their own specifications rapidly, at low cost and without the assistance of programming.

REDATAM and REDATAM Plus which can now be linked to Geographical Information Systems, are in use in St.Lucia, Panama, and the English-speaking Caribbean countries and various Latin American countries have or are planning to disseminate their 1990 census data using REDATAM-Plus. The initial applications have been in the Statistical Institutes or the Depts. of Statistics, but now users include researchers and corporate clients such as the Republic Bank of Trinidad and Tobago which has recently purchased a subset of the census data from the Central Statistical Office in REDATAM format.

This is only one illustration of the type of strategic tool which is in use and needs to be further exploited by information managers in the Caribbean. The existence of data has to be matched by selected reformulation and repackaging to provide instruments for effective decision-making.

Repackaging of data would result in the definition of more appropriate development indicators, useful for specific sectors or issues.

The range of systems which have been installed and are in place in national and regional institutions paint a scenario of much innovative activity. While no one could claim that there has been total coverage of all the private and public and research institutions by innovative information management systems, the experience of developing databases, particularly bibliographic, for managing information units and for providing basic services to users has been acquired within the region. The short-term training in information management which stimulated some of these developments is being institutionalized at the University of the West Indies and at the other tertiary level institutions. All these activities are governed by policies which are being further developed. At this stage we must also look at the subsequent stages of the information transfer cycle. The overall objective of information management is to achieve development impact - particularly impact which can be recognized as resulting from the use of information.

This kind of assessment is evidently necessary for various stages of information planning and management, but is obviously a question to which there are no immediate simple solutions. Some of the answers to such a questions must be situational, while others would be related to specific periods and changes over time. This is a question which was first raised by Martha Stone, Director General for Information Sciences and Systems of IDRC, when she addressed the European Association of Development Institutes in September 1991. This issue has since been analyzed and discussed by a group of researchers and practitioners with a view to defining indicators for assessment of impact. While some of this research can be carried out a theoretical level, the value of participatory action research is also evidenced in an investigation of this kind.
The Caribbean, with its range of experiences in information management and the points signalling successful applications seems to be a good candidate for testing this new step in information science research.

The Consultative Committee on Caribbean Regional Information Systems (CCCRIS) was established with the mandate to support the development of these systems, and its program of activities provides a suitable basis for testing some assessment indicators.

The workplan of the CCCRIS has been focussed on issues related to the sustainability of information systems; ownership of data and databases, commercialization of information services, assessment of existing policies for inter and intra-regional data communication and the assessment of the impact of information services.

This area of research is a new and vital aspect of further development of information management. It is this which can be expected to provide the basis of innovations and for policy making in the information sector and to strengthen these sections of the information chain.

The question is then: Is all this leading to towards strategic use of information? Certainly there are enough high points to say that the direction is recognized and the paths are being cleared on the side of management, and services, but the gaps still exists in terms of strategic use of information, and still need to be reduced through systems for reformulating and repackaging data, and for providing simulations such as those of the DRMS (Debt Recording and Management System), to assess the implications of different scenarios and policy options, and to provide strategic inputs into decision-making.

As I conclude I would also like to examine a possible role of libraries in this changing scenario. Certainly several of the systems for strategic use of information are not necessarily based in libraries of documentation centres. They may in research departments in informatics units, hospitals, or anywhere where users may located. This is indeed a prime opportunity for the referral functions of libraries and information centres to be further developed. Certainly the services of online access to commercial database are examples of services which need to be provided, but the users requirements - which need to be further studied, would suggest that selected issues need to be summarized and analyzed in state of the art summaries and in information packages which bring together information from the numerous print and electronic media which are now involved in the information management function.

CEGADE REDATAM Informa

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Resume

Ms Durrant has since August 1989 been Regional Program Officer for the International Development Research Centre, with responsibility for information sciences and systems in Latin America and the Caribbean. Her previous experience as an independent consultant (1984-89), with the Caribbean Community (CARICOM) Secretariat, (1975-79, 1983-84), the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) (1979-1984), and the University of the West Indies, has provided her with a wide range of experience in policy development, in the technical aspects of information management and other development issues, particularly in the area of information policy, networks, systems and services.

Her present activities involve support to the development of innovative information systems and services, information science research, activities for information policy formulation and implementation in Latin America and the Caribbean. This is done particularly through financial support to development projects, but also through the facilitation of meetings, and the networking of institutions and persons pursuing similar interests within and outside the region.

Working as an independent consultant for UNESCO, IDRC, FAO, CARICOM and ECLAC, Ms Durrant undertook projects related to the design of regional, national and organizational information systems, and her publications include *Information Technology and Government in the Caribbean, and the Regional Information System Strategy for the Caribbean to the year 2000.*

In the capacity of Regional Information Adviser to the CARICOM Secretariat, Ms Durrant provided advisory services to the OECS Member States in the implementation of plans for the development of National Information Systems, and previously as Library and Information Training Officer for **CARISPLAN** the Caribbean Information System - Planning, Ms Durrant provided technical assistance to the national focal points in the development of special libraries, and in the initiation of value-added processes and services.

Previously Ms. Durrant was Assistant Librarian of the CARICOM Secretariat, and Assistant Librarian at the University of the West Indies (Law and Main Libraries)

Memberships:

Canadian Association of Information Science, ACURIL

Special interests:

Information Technology Policy; Research - Information System - Policy linkages

Technical Experience

1989 TO DATE
International Development Research Centre Regional Program Officer
(LATIN AMERICA AND THE CARIBBEAN) INFORMATION SCIENCES & SYSTEMS DIVISION

1984-89
Independent Library and Information Systems Consultant

CONSULTATIONS INCLUDING:
1989
DESIGN OF A CARIBBEAN AGRICULTURAL TECHNOLOGY INFORMATION SERVICE - FAO / CARIBBEAN AGRICULTURAL RESEARCH AND DEVELOPMENT INSTITUTE (CARDI);

EVALUATION OF IDRC'S INFORMATION SCIENCE PROJECTS IN THE CARIBBEAN;

1988
SYSTEM DESIGN - A DOCUMENTATION SYSTEM FOR THE NATIONAL AGRICULTURAL RESEARCH INSTITUTE (NARI) GUYANA;

SYSTEM DESIGN - A DOCUMENTATION AND DATA SYSTEM FOR THE UNIVERSITY OF THE WEST INDIES CONSORTIUM GRADUATE SCHOOL AND THE INSTITUTE OF SOCIAL AND ECONOMIC RESEARCH;

1987
DESIGN OF A NATIONAL INFORMATION SYSTEM - ARUBA (Unesco consultant);

DEVELOPMENT OF A REGIONAL INFORMATION SYSTEM STRATEGY AND POLICY FOR THE CARIBBEAN (UNECLAC consultant);

INITIAL ESTABLISHMENT OF THE ORGANIZATION OF EASTERN CARIBBEAN STATES (OECS) INFORMATION SYSTEM (OECS/INFONET) (consultant to OECS Secretariat);

1986
Feasibility study for the DEVELOPMENT OF THE OECS INFONET Network PROJECT TO SUPPORT OECS INFONET (Consultant to IDRC);

1985
DESIGN OF A REGIONAL INFORMATION NETWORK LINKING THE OECS SECRETARIAT TO THE NATIONAL DOCUMENTATION CENTRES OF THE MEMBER STATES;

1984
JOINT COURSE COORDINATION UNESCO/UNECLAC SEMINAR ON NETWORK DEVELOPMENT IN THE CARIBBEAN;

1983-84
Caribbean Community Secretariat - Regional Information and Documentation Adviser with responsibility for assisting five OECS member states in the implementation of their national information plans;

1979-1984
UNECLAC. Office for the Caribbean - Library and Information training Officer FOR THE CARIBBEAN INFORMATION SYSTEM - ECONOMIC AND SOCIAL PLANNING SECTOR (CARISPLAN) with responsibility for developing a network of national documentation centers to serve as national focal points for the system;

1975-1979
Caribbean Community Secretariat - Librarian Technical Services - cataloging, indexing and abstracting;

1966-1975
University of the West Indies - Librarian - Government Serials Acquisitions, Indexing and Reference, Law Library Acquisitions, and Indexing.

Fay Durrant

Academic Data

GRADUATE WORK
SYRACUSE UNIVERSITY SCHOOL OF INFORMATION STUDIES, SYRACUSE NEW YORK
MLS 1988

UNIVERSITY OF TORONTO SCHOOL OF LIBRARY SCIENCE, TORONTO
BLS 1968

UNDERGRADUATE WORK
UNIVERSITY OF THE WEST INDIES
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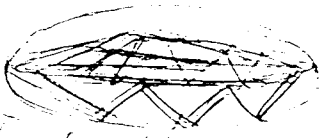

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Abstract

Information management - the collection, analysis, access, use, and marketing of information - in the Caribbean can be characterized by some important turning points over the past 15 years: the design and initial development of national information systems, and regional networks; the impact of computerization; development of a Regional Information System Strategy; increased communication between the systems through improved access to telecommunications facilities; and the definition of new paths or strategies through linkages between information science research and policy making for the information sector.

These developments have mainly been led by the library community - academic, public and special libraries, and are more clearly evidenced within the ambit of government structures. The successes can mainly be attributed to the fact that the professional stimulus has been supported by recognition by policy makers and researchers that the provision of information is central to the economic and social progress of the region.

One of the important turning points was therefore the design and implementation under the auspices of the CARICOM Secretariat and the UN Economic Commission for Latin America and the Caribbean, of the **Regional Information System Strategy for the Caribbean to the year 2000.** This strategy can be regarded as the first step towards the coordination of regional efforts to manage the information resources of the region, and in tune with national policies, it provides a basis for the continued monitoring and updating of developments in this field.

In the meanwhile the Caribbean has not been isolated from the current political, economic and social changes which have been impacting societies worldwide, a global information society is emerging concurrent with some major changes in Caribbean and other societies.

The increasing democratization of governments and the participation of multiple stakeholders in policy implementation; the privatization of governments and the downsizing of government organizations; increased availability of information technologies at lower costs; awareness of the environment, environmental accounting, and its relationship to development; and the increasing recognition of the vital role of participatory research in identifying appropriate development directions, are all trends which need to be taken into consideration by today's information managers.

Simultaneously trends such as developments in information processing and telecommunications and the increasing links between these technologies; the emergence of a more educated and informed population and associated value changes; higher degrees of specialization in a more knowledge-based economy and consequent changes in the structure of work; the increasing role and reach of the mass media; an increased interaction between public and private sector organizations, are all requiring changes in information systems, and in the relationships with the users.

The main question before us therefore is how can the appropriate policies be identified, formulated, and implemented, to match the changes in the Caribbean societies and to stimulate strategic uses of information for decision-making?

Certainly the new paths need to be based on the exploitation of the existing experience and infrastructure, reformulating or repackaging available information resources, and implementation of cost-effective mechanisms for the long-term sustainability of information systems.

An important issue is the continued definition and testing of regionally applicable methodologies, for the development of the systems and for assessing the impact of information on the development agenda.

This issue is being dealt with in an interesting regional exercise which is being implemented, under the guidance of the **Consultative Committee on Caribbean Regional Information Systems (CCCRIS)** with financial support from IRDC. This project will make an important contribution to the field of information science, by supporting research related to the issues of sustainability of information systems, particularly the feasibility of commercialization of information services, assessment of the impact of information services, ownership of data and databases; the assessment of existing policies of inter and intra-regional data communication, and education and training programs required for this new era.